DOCUMENT RESUME

ED 204 344 SP 018 680

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TITLE Teacher Effectiveness Research: Implications for the Reading Profession.
INSTITUTION Michigan State Univ., East Lansing. Inst. for Research on Teaching.
SPONS AGENCY National Inst. of Education (ED), Washington, D.C.
REPORT NO IRT-OP-45
PUB DATE Jan 81
CONTRACT 400-76-0073
NOTE 55p.; Paper presented at the National Reading Conference (San Diego, CA, 1980).
AVAILABLE FROM Institute for Research on Teaching, College of Education, Michigan State University, 252 Erickson Hall, East Lansing, MI 48824 ($4.25).

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement; Classroom Techniques; Decision Making; *Educational Research; Interaction Process Analysis; Language Proficiency; Language Skills; Learning Processes; *Reading Instruction; *Reading Research; *Research Methodology; Teacher Behavior; Teacher Education; *Teacher Effectiveness; *Teaching Methods

ABSTRACT

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ED204344

Occasional Paper No. 45

TEACHER EFFECTIVENESS RESEARCH:

IMPLICATIONS FOR THE READING PROFESSION

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Published By

The Institute for Research on Teaching
252 Erickson Hall
Michigan State University
East Lansing, Michigan 48824

January 1981

Publication of this work is sponsored by the Institute for Research on Teaching, College of Education, Michigan State University. The Institute for Research on Teaching is funded primarily by the Program for Teaching and Instruction of the National Institute of Education, United States Department of Education. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. 400-76-0073)

SP 018 680

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Teachers' thoughts and decisions are the focus of studies currently under way at Michigan State University's Institute for Research on Teaching (IRT). The IRT was founded in April 1976 with a $3.6 million grant from the National Institute of Education. That grant has since been renewed, extending IRT's work through September 1981. Funding is also received from other agencies and foundations. The Institute has major projects investigating teacher decision-making, including studies of reading diagnosis and remediation, classroom management strategies, instruction in the areas of language arts, reading, and mathematics, teacher education, teacher planning, effects of external pressures on teachers' decisions, socio-cultural factors, and teachers' perceptions of student affect. Researchers from many different disciplines cooperate in IRT research. In addition, public school teachers work at IRT as half-time collaborators in research, helping to design and plan studies, collect data, and analyze results. The Institute publishes research reports, conference proceedings, occasional papers, and a free quarterly newsletter for practitioners. For more information or to be placed on the IRT mailing list please write to : The IRT Editor, 252 Erickson, MSU, East Lansing, Michigan 48824.

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Abstract

Designed to create a foundation for collaboration between research on teaching and research on reading, this critical review of teacher effectiveness first provides a historical perspective as a means for creating a "common ground" between the two fields. Teacher effectiveness findings are then presented in two major categories. The first examines direct instruction, classroom management, and psychological conditions as these contribute to opportunity to learn. The second examines the research on teacher planning and teacher decision making as these illustrate the prevalence of technical teacher behavior. Implications for the reading profession are presented in terms of teacher education, reading research, and possible cooperative ventures between research on reading and research on teaching. The prevalent theme throughout the review is the need for both reading and teaching research to begin looking beyond opportunity to learn and technical teacher behavior to examine the qualitative dimensions of teacher effectiveness.

TEACHER EFFECTIVENESS RESEARCH: IMPLICATIONS FOR THE READING PROFESSION[1]

Gerald G. Duffy[2]

> In an old New Yorker cartoon, a psychiatrist says to a reading teacher on the couch, "Now, as I understand it, your problem began when little Susie Jones said that she didn't have a learning disability but that you had a teaching disability."

Reading professionals have been keenly aware of the recent explosion of knowledge in language and language acquisition. The resultant focus on the interactive nature of reading and on the child's language processing has altered forever the way people think about the nature of the reading process.

However, reading is not the only research revolution in town. Another one--a revolution focused on the teaching process--has altered understanding of life in classrooms just as the revolution in reading has altered understanding of the reading process. Both the former, symbolized by but not limited to the Institute for Research on Teaching at Michigan State University, and the latter, symbolized by but not limited to the Center for the Study of Reading at the University of Illinois, have great potential for improving

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[1]An invited address presented at The National Reading Conference, San Diego, California, 1980.

[2]Gerald G. Duffy is co-coordinator of the IRT's Conceptions of Reading Project and an MSU professor of elementary and special education. The author gratefully acknowledges the contributions of Howard Seiler for searching the literature; of Linda Anderson, Jere Brophy, Joyce Putnam, Laura Roehler, George Sherman, and Lee Shulman for critiquing earlier drafts of the paper; and of Peggy Medler and Theresa Wibert for their care and patience in preparing the manuscript.

reading instruction in schools. To date, however, the two research revolutions have been moving forward "out of earshot" of each other. Research on reading reflects little of what has been discovered about teaching; the research on teaching reflects few of the findings about the reading process.

I believe that collaborative efforts by the two research communities would have greater impact at the classroom level than independent ones. Consequently, this review of teacher effectiveness research is designed to be a first step in a dialogue between the two research communities. Since it is a review of teacher effectiveness, it must necessarily emphasize how research on teaching contributes to reading more than the reverse. Nevertheless, it is based on my faith that the two research communities have the potential to reciprocally inform each other and, ultimately, to make significant collaborative contributions to classroom reading instruction in the decade ahead.

Background

The research on reading has helped us understand the implicit contractual agreement between the writer and the reader in which the writer must establish "points of contact" between the message and the reader's experience (Tierney & LaZansky, 1980). Since my purpose is to encourage a collaborative joining of two diverse research communities, it is appropriate that I provide such "points of contact" and encourage the "schema-match" necessary for the goal of this paper to be achieved. These points of contact are discussed in three categories: the history of teacher effectiveness research, the evolving concept of teacher effectiveness, and conflicting conceptions of teaching.

The first point of contact involves an understanding of the massive evolution that has occurred in research on teaching in the past ten years. The history of this evolution is presented here in two sections: the "old" and the "new" research on teacher effectiveness.

The "Old" Teacher Effectiveness Research

Teacher effectiveness research is not new. To the contrary, it has been going on in one form or another for the entire twentieth century. Its impact prior to 1975 was meager, however. The American Educational Research Association Committee on the Criteria of Teacher Effectiveness (Barr, Bechdolt, Coxe, Gage, Orleans, Remmers, & Ryans, 1952) stated the case clearly when they said:

> The simple fact of the matter is that, after forty years of research on teacher effectiveness during which a vast number of studies have been carried out, one can point to few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him tenure, that an agency can employ in certifying teachers, or that a teacher education faculty can employ in planning or improving teacher education programs.

Even 22 years later, Duncan and Biddle's (1974) statement that theirs is "the first text yet written that concerns the study of teaching" is a sad commentary on the significance of the "old" teacher effectiveness research.

What was the nature of this "old" research? Medley (1977a, 1979) and Duncan and Biddle (1974) provide excellent histories. Essentially, the "old" teacher effectiveness research had three

thrusts.

The first focused on teacher personality and educational characteristics as they related to student attitudes and achievement. The earliest studies of this type asked pupils to describe effective teachers, with lists of traits being produced that supposedly described effective teachers. This approach failed not only because the correlations between characteristics and achievement were low and inconsistant from study to study but because, as Medley (1977a) pointed out, the research was based on

> teachers *perceived* as effective. In no instance was any evidence adduced to show that teachers possessing these characteristics were actually more effective in promoting pupil achievement of any of the goals of education. That is, the lists were never shown to be valid. Insofar as the lists described anyone, they described the teacher who *looks* effective.

Perhaps Artley (1969) provided the epitaph for this research, from the standpoint of reading professionals as well as the profession as a whole, when he said:

> As a result, they have described for us a kind of invisible, ghost-like person who, in fact, may not exist. She has been found to be cooperative, sympathetic, poised. She is well-groomed, healthy, imaginative, and cooperative. She gets along with her co-workers and her principal and she gets her reports in on time. As one of my friends said, 'she has the same characteristics we expect from a good bar girl.'

A second type of "old" effectiveness research, quite familiar to the reading professional, attempted to prove one method superior to another. This research, like most "old" studies, ignored the instructional processes and classroom interactions which are the essence of teaching and, like the First Grade Studies (Bond & Dykstra, 1967) and others, contributed little to the understanding of what makes an effective teacher.

The third major type, emerging in the late 1950's and early 1960's, emphasized systematic observation of classroom interactions, particularly verbal interactions (Flanders, 1970; Medley & Mitzel, 1963). Amazingly, this is the first time that researchers began looking inside classrooms and, as such, it heralded the approach of the "new" research on teacher effectiveness that was to follow in the 1970's. Generally speaking, however, the early forms of this research had limited initial impact, largely because of what Duncan and Biddle (1974) call "commitments"--the conducting of research in order to prove the importance of particular values held by the researcher.

In sum, the "old" research did little to explain teacher effectiveness. In 1975, Rupley (Note 1) was forced to describe teacher effectiveness in reading as a "puzzle phenomenon" consisting of bits and pieces that could not be fitted together to say anything meaningful about how to conduct an effective reading program. Duncan and Biddle (1974) summarize the impact of the "old" research

by saying:

> Much research on teacher effectiveness has been conducted, but little knowledge had been developed from the effort. Indeed, so little has been known that some educators have concluded that teaching is unknowable--one of the mystic skills akin to preaching or artistic creativity. Other educators have considered the activities of teaching to be so obvious as to need no research at all. Thus, master teachers write books in which they recommend the strategies they have found workable in the classroom, novelists such as Jonathan Kozol or Bell Kaufman entertain us with archtypical descriptions of teaching practices from a single school, and curriculum innovators outline new teaching programs in expectation that they will be conducted in the manner specified and that they have the effects desired. Still other educators have, in a sense, given up on teaching and concluded that pupils will learn regardless of--or in spite of--teacher's effort or that good teaching consists merely of the provision for a "supportive learning environment."

The "New" Teacher Effectiveness Research

The pre-1970 research did not provide substantive data regarding the nature of teacher effectiveness. What happened in the 1970's to change this?

The critical difference was that observations came into use to determine what goes on inside classrooms. Observation was not a regular part of the "old" research studies and no one knew what was actually happening, particularly as it related to the instructional interaction between teachers and students.

The result was that assumptions about what happened in classroom instruction went largely unchallenged and teaching principles, generalizations, and theories based on these assumptions were uncritically accepted. Recent research, in contrast, has been dominated by classroom observation. Two methodologies have emerged in which observation has been used in different ways to achieve different purposes: process-product studies and descriptive studies.

Process-product research. Process-product studies employ observation tools that trained observers use when visiting classrooms to record how often a particular phenomenon noted on the observation form occurs in actual practice. The combined observations are analyzed, with the individual teacher as the unit of analysis, to determine the correlation between particular coded items and achievement growth as determined by standardized achievement tests and/or by less formal attitude measures. Influenced by the behavioristic tradition, the focus has been the overt acts of teachers and the relation between the frequency of these acts and various measurable outcomes. Historically, such research had not been very successful. However, Rosenshine and Furst (1973) and Duncan and Biddle (1974) created a comprehensible mosaic out of what had previously been a confused and largely contradictory mass of data and are credited with providing the springboard for the growth and acceptance of this type of research. Subsequent

methodological improvements (see Brophy, Note 2) have since solidified its position.

The process-product findings, expressed as middle-range correlations that have been demonstrated to be consistent from study to study, point to a strong relationship between certain clusters of teacher behaviors and student outcomes. Further, and most encouraging, these constellations of behaviors have been validated in experimental studies (for excellent examples of such experimental validations of process-product findings, see Anderson, Evertson, & Brophy, 1979; Good & Grouws, Note 3; and Stanford's Program on Teaching Effectiveness, Note 4). Medley (1977a) summarizes the impact of the process-product research by stating that the "risk that any of them (findings) will be disproven by future research is slight."

Nevertheless, process-product research has not been without critics. Conceptually, it has been criticized as too narrow and prescriptive (Doyle, 1977; Cazden, Note 5), too simplified in the face of classroom complexities (Fisher & Beliner, Note 6) and too behavioristic rather than cognitive (Lanier & Shulman, Note 7). Methodologically, the potential lack of reliability and validity in the observation measures, and the design/analysis weaknesses associated with correlational studies have all been criticized (Koehler, 1977).

Descriptive research. Such criticisms contributed to the rise

of descriptive, or qualitative, research. As Koehler (1977) has pointed out, qualitative research attempts to describe or define the process, to determine what is rather than what should be. It is less concerned with improvement and more concerned with understanding.

Despite the common devotion to classroom observation, the differences between descriptive and the more improvement-oriented process-product research are startling. While the process-product researcher observes specific behaviors with a predetermined observation form in multiple classroom settings, the descriptive researcher observes a limited number of classrooms (sometimes only one), avoids specifying the precise behaviors being sought and records the classroom life (as well as impressions of this life) in free-form field notes. In contrast to the process-product research, descriptive research comes from an anthropological tradition, is heavily influenced by cognitive psychology and cognitive information processing, and serves as an umbrella for a variety of types, including ethnography, participant observation, and sociolinguistics, among others. Like the process-product research, it has received criticism, with the focus being on the general absence of outcome measures, the reliability problem inherent in qualitative observation, limited sample size, and problems of generalizability. Despite criticism and diversity of style, however, descriptive research has produced a rich array of findings in the past five years, tempering tendencies to use process-product findings

in narrow, prescriptive ways by highlighting the variability of behavior in the classroom, the multiple complexities of classroom life, the immense information-processing task faced by teachers, and the multiple sociological forces that interact in the classroom.

The historical evolution of research on teacher effectiveness is the first point of contact between the reading and teaching communities. Because of the shift to observation of classroom processes and because process-product and descriptive designs are currently being used in creative combinations, the nature of teacher effectiveness research has changed dramatically in the past 10 years. To chalk off research on teaching on the basis of the way it used to be would be an error.

The Expanding Concept of Teacher Effectiveness

The above historical evolution has expanded the concept of teacher effectiveness, encompassing subtleties and complexities not traditionally associated with the term. This modification is a second point of contact.

Prior to about 1975, teacher effectiveness research focused on determining the extent to which certain teacher behaviors produce greater amounts of specified pupil outcome. By 1975, this research, largely conducted within the process-product paradigm, had determined that certain patterns of teacher instructional

behavior make a major difference in pupil achievement.

This finding spurred a second research thrust, beginning in about 1975, in which the importance of the teacher was assumed and the questions focused more on why some teachers were more effective than others. The basic hypothesis was that instructional information processing and instructional decision making were the keys. However, the studies, primarily descriptive in nature, contradicted the hypothesis, suggesting instead that teaching is so complex that teachers must limit the amount of information they process and that, in fact, the demands of the workplace prevent them from making significant decisions during the interactive phase of teaching.

These findings have triggered a third set of studies, currently underway, that examine the complexitites of the workplace as a means for explaining why teachers are less reflective than hypothesized. These studies have taken three forms, depending upon the breadth with which the workplace is viewed. All, however, are united in the belief that simply correlating teacher behavior with pupil outcomes is insufficient in itself for understanding teacher effectiveness.

At the first level, the workplace is the classroom, with the complexity of teaching explained both in terms of technical and social demands. Fisher (Note 8) describes the technical demands:

> Some of the broad areas in which teachers must be competent include organization,

> management, interpersonal relationships, planning and evaluation. . . Within these broad areas, teachers must develop and refine a multitude of sub-skills to accomplish the diagnosis, prescriptions, the presentation, monitoring and feedback functions which support day-to-day learning in the classroom. These skills cannot be implemented one at a time. The nature of teaching is such that several skills are required simultaneously.

Shulman (Note 9) describes the case for the social complexity of classrooms:

> Classrooms are complexly nested social systems in which participants are engaged in jointly produced educational activities, reciprocally caused and effected, negotiating for opportunities and competing for attention and understanding.

Hence, at the classroom level, research focuses on both technical and social complexities. The explicit curriculum, the "hidden" curriculum of implicit rules and procedures that govern classroom life, and the ecological relationships among them are all examined in order to understand why teachers appear to react in conditioned ways rather than as reflective decision-makers.

At the next level, the workplace involves more than the classroom. Here, Shulman (Note 9) argues that the teacher's world encompasses the multiple role demands of the tutor, the classroom teacher, the curriculum planner, and the organization member. He suggests that the information processing of teachers is explained, at least in part, by a "role strain" resulting from the teacher's

attempts to accommodate the multiple demands of these four contexts. As such, he sees teaching as more than information processing; it is also social-role processing and the teacher's mental life and its impact on effectiveness cannot be understood unless the demands of the multiplicity of teaching contexts and their respective task environments are understood. As he summarizes:

> The teacher is working simultaneously as a tutor, instructor, pedagogue and organization member. Thus, the challenge of teaching is characterized by the need to work effectively within each level while also nimbly negotiating one's way across levels. Moreover, our concept of teacher effectiveness will surely be different depending upon the level at which we choose to define and assess effectiveness. (Shulman, Note 9)

At its broadest, the teacher's workplace is viewed as society as a whole. As described by the "new sociologists," the complexities of teaching can be attributed to pressures that go beyond even the organization level described by Shulman. In this view, these complexities are best understood when examined from the perspective of the teacher as a mediator and negotiator of a variety of explicit and implicit pressures and mandates from the total society (Schwille, Porter, Gant, Belli, Floden, Freeman, Knappen, Kuhs, & Schmidt, 1979).

Hence, the second point of contact between the reading and teaching communities lies with understanding that the term "teacher effectiveness" has been modified. The former, relatively simple concept of a unidirectional linear process in which teacher

behaviors caused student outcomes in an input/output relationship has evolved into a view of teaching as reciprocal interactions between teacher and context with effectiveness being a multi-faceted function of this interaction. Recent research shows teacher effectiveness to be a far more complicated concept than was once thought.

Conflicting Conceptions of Teaching

The third point of contact between reading and teaching researchers is embedded in the conception each holds of teaching. Despite past references to the importance of the teacher by reading professionals such as Bond and Dykstra (1967), Ramsey (1962), Artley (1969), and others, the reading profession as a whole has placed little emphasis on the actual act of teaching. Reading educators, for instance, are more likely to debate whether the reading curriculum should reflect holistic or sub-skills analyses or whether basal texts or language experience is the "best approach" than they are to discuss what teacher behaviors might stimulate desired reading outcomes. Further, while researchers on teaching emphasize *teacher* mediation and guidance of learning, reading professionals emphasize *learner* mediation, arguing that teacher guidance impedes reading acquisition by constraining the "naturalness" of learning. Bringing these two divergent backgrounds together is difficult. In an attempt to do so, the differences

will be discussed first as a function of situational context and, second, as a function of preserving the naturalness of language during instruction.

As a problem of situational context, the differences in conceptions of teaching can be understood by returning to Shulman's (Note 9) four levels of context: tutor, classroom instruction, curriculum development, and organization member. Historically, the reading profession has focused on understanding the nature of the reading process (a function of the third level). When translating this knowledge to practice, the emphasis has been on describing what reading is in methods courses and methods textbooks (a third-level function); organizing reading curriculum into basal texts, skill hierarchies, and curriculum guides (again, a function of the third level); and preparing clinicians and remedial reading specialists (a function of the first level). Hence, the reading professional emphasizes levels one and three. In contrast, however, researchers on teaching emphasize the second level--classroom instruction. This difference in perspective accounts for much of the difference in conceptions of teaching.

A common ground between the two groups might be the fact that classroom teachers represent the largest clientele for both research communities. While people in reading must certainly maintain their focus on the nature of reading, they nevertheless have a simultaneous responsibility for communicating their findings in terms of the classroom context shared by the bulk of their clientele. By assuming this responsibility, they could close the gap between the teaching conceptions held by reading and teaching researchers respectively.

Regarding the "naturalness" of language acquisition, research on the reading process suggests that comprehension is created by the reader, not the teacher, in response to the text, and that comprehension is not something that teachers can place directly into the heads of pupils. On the other hand, researchers on teaching report convincing data indicating that patterns of teacher behaviors *do* make a difference in producing achievement gains (including gains in comprehension), and that many of the crucial behaviors involve techniques of direct instruction, as opposed to more passive instructional approaches that call for less teacher intervention. Herein lies a conflict.

Perhaps the two groups can be brought closer together on this issue by re-considering the concept of "naturalness." Because pupils create meaning out of their personalized experience backgrounds does not necessarily mean that teachers should not expedite this process by showing them how to create meaning; it only means that the guidance should not force the child to substitute the teacher's interpretation for his/her own. Hence, teachers can preserve the naturalness of getting meaning while still performing the professional task of teaching pupils *how* to get meaning. Collaborative efforts by the two research communities in this area could be quite fruitful.

Summary

"Schematic mis-matches" could impede collaboration by the reading and teaching research communities. Hopefully, the above discussion of the evolution of teacher effectiveness research, the resultant modification of the concept of teacher effectiveness, and the potential conflict in conceptions of teaching will enhance communication.

However, it should also be noted that communication is two-edged. The writer has a responsibility, but so does the reader. As stated by Tierney and LaZansky (Note 11):

> It is the responsibility of a reader to bring to a text conceptualizations which support a reasonable interpretation of the text rather than result in an abandonment of the author's message.

Major Teacher Effectiveness Findings

The seventies was a decade of growth for research on teaching. Many studies, both process-product and descriptive, were funded by the National Institute of Education or were conducted independently. The bulk of these focused on the teaching of basic skills (mostly reading and mathematics) in school settings where academic achievement has been traditionally at or below national norms. A multiplicity of findings emerged, but they can be discussed in terms of two major conclusions:

1. The most effective teachers of basic skills generate the most opportunity to learn.

2. Such teachers are technical managers of instructional materials and activities rather than theory-driven and reflective decision-makers.

These conclusions can have a far-reaching and significant impact on the perception of classroom teaching. However, as Medley (1977a) has pointed out:

> The profile of the effective teacher that emerges is not entirely consistent with the general consensus of how a good teacher behaves or with the way teacher educators train teachers to act.

Two points should be made about the above lack of congruence. First, the conclusions about teacher effectiveness represent classroom life as it currently is. Second, such reality does not necessarily represent either what effectiveness should be or what it can ultimately become. The findings do, however, serve as an important foundation for learning more about the teaching process and for making future teachers more effective than current ones.

Opportunity to Learn

Opportunity to learn is generally discussed in terms of Carroll's (1963) model of school learning in which three pupil variables--aptitude, ability, and perserverance--interact with both opportunity to learn and quality of instruction to account for learning outcomes. The findings from research on teaching reflect three components of the opportunity to learn variable: direct instruction, management, and psychological conditions.

Direct instruction. Direct instruction is a global concept, largely associated with reviews by Rosenshine (1976, 1979, 1980), that encompasses the variety of behaviors displayed by teachers in classrooms where learning gains are great. These behaviors can be discussed in terms of engaged time and teacher monitoring of pupil activity.

In the classroom, a subject such as reading is allocated a certain amount of instructional time. Engaged time is that proportion of the allocated time in which the student is on task or "engaged." The more time a student spends engaged in an academic endeavor, the more that will be learned; the less time engaged,

the less that will be learned (Berliner, 1979; Rosenshine & Berliner, 1978). As Fisher, Berliner, Filby, Marliave, Cahen, and Dishaw (1980) said,

> Two classes might allocate the same amount of time to reading instruction, but one class might have almost twice as much real engaged learning time as the other. Since engagement rate has been shown to be highly variable across classes and since that variability has been empirically related to achievement, it is possible that increasing engagement rates will lead to increased achievements.

The engaged time concept is a clear and simple one. Unlike most clear and simple notions in education, however, this one repeatedly discriminates effective instruction from ineffective instruction.

The second component of direct instruction focuses on teacher monitoring behaviors that insure that pupils, once engaged, will remain engaged. These behaviors imply teacher-pupil interactions with which reading professionals have traditionally demonstrated some discomfort, but that have been validated in basic skills contexts in both primary grades (Anderson, Evertson, & Brophy, 1979) and remedial secondary classrooms (Stallings, Note 12). They indicate that the most effective teachers are those who are the most structured, the most in control, and the most directive. These are the teachers who monitor pupils' activities closely, who call for frequent repetition, and who drill. These are the teachers who move in small steps, who teach to over-learning, and who elicit response from and provide feedback to each individual student

(Berliner, 1979; Rosenshine, 1979; Brophy, Note 13). Such teacher interaction is called "high structuring" by Gage (1978) while Good (Note 14) prefers to call it "active teaching." Regardless of its label, however, the data indicate that these behaviors do distinguish effective basic-skills teachers from ineffective ones.

In summary, direct instruction creates opportunity to learn by engaging pupils and by insuring that such engagement is maintained. Perhaps Koeler's (1977) statement about direct instruction is the most descriptive:

> In this model, the teacher supervises lessons and workbook activity, allows little free time or unsupervised student desk work and clearly communicates the goals of the lessons to the students. The teacher decides what activities will take place, but the students are actively involved in the lesson. Content coverage is extensive, and questions tend to be focused at a low cognitive level. These questions are geared to information which should already be known rather than to that which can be deduced or guessed. Teacher reinforcement rapidly follows most answers. Learning is organized around questions posed by the teacher or materials provided by the teacher. Teacher-student interactions are direct and academically oriented.

Classroom management. Effective teachers are also good classroom managers; they create more opportunity to learn by organizing themselves and the classroom to enhance efficiency and minimize time wastage. The importance of management is stated succinctly by Good (Note 13).

> Teachers' managerial abilities have been found to relate positively to student achievement in every process-product study conducted to date. . . It appears that teacher managerial skills are necessary if reasonable pupil achievement is to occur.

Its importance in reading particularly is emphasized by Leinhardt, Zigmond, and Cooley (Note 14), Duffy (Note 15), Roehler and Schmidt (Note 16), Zigmond, Leinhardt, and Cooley (Note 17), and others who point to the time lost because of poor management.

Management is another aspect of teaching that causes reading educators some difficulty. This is so for three reasons.

First, reading people seem to equate classroom management with skills-management systems. This is an erroneous association. Classroom management refers to techniques for generating maximum instructional time; monitoring pupil progress through a hierarchy of skills may be one aspect of generating more instructional time, but the two concepts are not synonymous.

Second, the academic heritage of reading professionals is closely tied to the tutoring of remedial students, where time management is less complex. In contrast to the clinic where the pupil typically receives the tutor's individual attention, time in the classroom is a limited commodity demanding what Shulman (Note 9) calls "distributional rules." Hence, the classroom teacher faces an "opportunity-to-learn" problem seldom faced by the clinician. As Brophy (Note 18) says,

> So long as teachers must deal with classes of 25 or 30 instead of tutoring single individuals, there will be trade-offs between meeting the needs of any individual and meeting the needs of other individuals or of the class as a group.

Third, even when reading educators understand the purpose of management, they tend to reject it because a common trade-off of teachers is to use routines as a way to maximize instructional

time and, to some people, routines imply mechanistic teacher-pupil relationships. This is unfortunate since, rather than inhibiting humanistic interactions, routines are the vehicles effective teachers use to "distribute" time so that they are personally engaged in as many meaningful interactions as possible while keeping traffic manager and disciplinarian interactions to a minimum.

The secret to effective management is the teacher's ability to establish such routines as preventative measures. As Good (Note 13) has said:

> The key behaviors that distinguish good classroom managers are those techniques which *prevent* misbehavior by eliciting student cooperation in general and involvement in assigned work specifically.

In addition, according to Anderson, Evertson, and Emmer (in press), the most effective teachers convey the purposefulness and meaningfulness of academic activities, instruct students in the skills of good behavior and select activities that reflect both students' level of understanding and need for information. Other crucial aspects of management are reported by Kounin (1970) and Brophy and Putnam (1979).

In short, good management increases opportunity to learn (or, more specifically, preserves for instructional purposes larger amounts of the allocated instructional time). The strong relationship between management, instruction, and greater learning outcomes has caused Brophy (Note 19) to suggest that management skills are closely linked with instructional skills--that good instructors tend to be good managers and vice versa. Hence, classroom management is one of the behavior clusters that distinguishes effective

teachers from ineffective ones.

Psychological conditions. Discussion of opportunity to learn is often confined to the purely physical notion of time and time use. However, research on teaching also suggests that effective teachers create psychological opportunities to learn as well as physical ones. These psychological conditions create a climate that encourages pupils to make maximum use of the time provided and include expectations, efficacy, and success experiences.

Expectancy is the teacher's perception of how much (and how quickly) a student can be expected to learn. Studies by McDonald and Elias (Note 20) and Brookover, Schweitzer, Schneider, Beady, Flood, and Wisenbaker (1978) in the United States and by Rutter, Maughan, Martimore, Ouston, and Smith (1979) in the United Kingdom all indicate that effectiveness is distinguished from ineffectiveness by the teacher's belief that students can and do learn.

Efficacy is also a type of expectancy, but it refers to the teacher's perception of his/her ability to be successful as a teacher and the level of effort and persistance exhibited as a result. Reports by Brophy and Evertson (1976) and by Good (Note 13) support the importance of efficacy. As Brophy (Note 19) says:

> Typically, the more successful teachers have a "can do" attitude, perceiving their students as capable of learning the material and themselves as capable of teaching it to them effectively. These

> teachers set higher goals than other teachers, and they are more persistant in laboring to meet these goals and overcoming obstacles if necessary.

The third psychological condition is student success. When students are engaged in tasks at which they are successful, they achieve more than when they are engaged in tasks at which they are unsuccessful. This concept is so crucial that the Beginning Teacher Education Study researchers, prime investigators of time as it relates to teacher effectiveness (Fisher et al., 1980), include success as part of their definition of engaged time. The implication, of course, is that time spent engaged in an excessively difficult task creates negative pupil behaviors that impede opportunity to learn. In addition, pupil success is tied to improved pupil attitudes. As Fisher et al. (1980) state,

> It is interesting to note that the high success component of learning is associated with more positive student attitudes. Successful students probably enjoy learning more because of their success. Failure, even when it is only occasional, appears to result in more negative attitude.

Brophy (Note 21) concurs, saying, "Students consistently given work that is too difficult for them can be expected to give up and eventually to become 'motivation problems.'"

In summary, effective teachers apparently motivate by letting pupils know that they are capable of learning, by exuding confidence in their own capacity to provide useful assistance to

pupils and by assigning tasks at which pupils can succeed, thereby making the prophecy come true. Other psychological conditions may be the teacher's acknowledgement to pupils of the difficulty of a learning task (Duffy & Sherman, 1977; Green, Note 22) and the matching of student and teacher styles (Brophy, Note 18).

Summary of opportunity-to-learn findings. The teacher effectiveness research, particularly as it relates to basic-skills instruction, indicates that teacher behaviors that create opportunity to learn are crucial for producing growth in pupil achievement (and, to some extent, attitudes). Properly understood, these findings can help improve reading instruction.

Unfortunately, however, they are not always properly understood. For instance, it is sometimes believed that the opportunity-to-learn findings represent support for discrete teaching behaviors in the tradition of competency-based instruction when, in fact, the findings refute the concept of generic teaching behaviors in favor of constellations or clusters of behavior (Brophy, 1979; Good, Note 13). It is sometimes believed that these findings will encourage the mandating of prescriptive algorithms which will make the teacher mechanistic and non-humanistic when, in fact, teaching researchers such as Gage (1978), Good (Note 13) and Fenstermacher (1980) argue eloquently for teacher judgment in implementing the findings. Some people believe that phonics

is emphasized to the detriment of comprehension when, in fact, successful comprehension programs such as the Kamehameha Project reflect opportunity to learn findings (Au, Note 23; Sloat, Note 24; Thorp, Note 25). There is a belief that these findings apply to all reading instruction when, in fact, they apply only to basic skill situations (Brophy, Note 18; Good, Note 13). Some people believe that the behaviors associated with opportunity to learn are universal truths when, in fact, effective teaching varies according to a multiplicity of contextual factors (Brophy, Note 18; Good, Note 13; Peterson, 1979). Finally, there is the belief that the findings are generated exclusively by behaviorists when, in fact, research on teaching reflects an interdisciplinary balance between behaviorists, cognitive psychologists, anthropologists, sociologists, educators, and others.

The message, I hope, is clear. Collaboration between reading and teaching researchers requires accurate interpretation of what the opportunity to learn findings do and do not imply.

Teaching as Technical Behavior

Researchers on teaching have long felt that teachers ought to be reflective. They have pointed to the rebellion of teachers involved with "teacher-proof" reading programs as evidence of what happens when a teacher's rationality is stifled, and they have assumed that teaching is guided by reasoned rather than conditioned or reactive behavior. This belief, together with the emerging interest in cognitive psychology and cognitive information processing, has led many researchers on teaching to look beyond direct instruction,

management, and psychological conditions to determine the goals, intentions, judgments, decisions, and information processing that undergird the behavior associated with teacher effectiveness. In short, teacher effectiveness researchers have begun to examine the nature of teacher rationality on the assumption that their behavior must be guided by what they think.

Parallel studies in reading have hypothesized that theories and models of reading influence a teacher's instruction (Harste & Burke, 1977; Kamil & Pearson, 1979; Buike, Burke, & Duffy, Note 26), that clinical and remedial decision making in reading reflect a rational model (Vinsonhaler, Note 27), and that teachers can reflectively apply diagnostic-prescriptive techniques in teaching reading (Duffy, Sherman, & Roehler, 1977).

Such interest in the teacher's mental life has produced two major categories of research on teacher thinking. They focus on the teacher as a planner and on the teacher as a decision maker.

The teacher as a planner. Clark and Yinger (Note 28) have reviewed virtually all the planning research. They report that teachers do not think about planning in the way researchers have assumed. Rather than following the objective-based, linear model of planning promoted in most teacher education programs, teachers apparently initiate planning by selecting an activity that they then fit to the time available and to other constraints. Only then, somewhat as an afterthought, do they consider what specific skills or processes the students may learn by pursuing this activity. Other reviewers and researchers (Brophy, Note 21; Morine-Dershimer, Note 29; Joyce, Note 30) also indicate that plans are made activity-

focused and routine in order to expedite teacher monitoring functions and to insure ease of management. In short, the research on planning pictures teachers as technicians who manage activities rather than as professionals who reflectively select strategies and tactics to achieve particular goals.

The teacher as a decision maker. Like planning, the concept of the teacher as an interactive decision maker reflects the ideal of rational teacher behvavior. As described by Clark and Yinger (Note 28),

> Interactive decision making refers to decisions made during the act of teaching. The teacher is seen as constantly assessing the situation, processing information about the situation, making decisions about what to do next, guiding action on the basis of the decisions, and observing the effectiveness of the action on students.

While laboratory research appears to substantiate the concept of interactive decision making (Borko, Cone, Russo, & Shavelson, 1979), classroom observation studies indicate that teachers are not as reflective on the job as had been assumed. Instead, as noted by Joyce (Note 30), teachers tend to emphasize the maintenance of on-going activity flow in the classroom rather than interactive decision making. In reading particularly, the apparent lack of decision making during the interactive stage has led Buike (Note 31) and Duffy and McIntyre (Note 32) to characterize the teacher as a "technician" and as "activity-driven." Durkin's (1979) study of classroom comprehension instruction (or, rather, the lack thereof) further suggests the absence of substantive instructional decision making, as does the report by

Tierney and Pearson (Note 33) that teachers object to open-ended comprehension questions in the basal text.

Possible causes of technical behavior. These findings about teacher planning and decision making are difficult to accept because researchers want to believe that teachers are basing their actions on rational instructional models. However, they are not so surprising when examined from the standpoint of classroom realities generally and reading instruction in particular.

Consider classroom realities. The first reality is that failure to establish an on-going activity flow results in serious behavioral management difficulties. Consequently, teachers convert a complex and potentially explosive group of 30 children into a predictable and simplified routine that can be monitored with relative ease (Brophy, Note 21; Shavelson, Note 34). Jackson (1968) summarizes the situation best when he describes the teacher's concern as,

> making some kind of educated guess about what would be a beneficial activity for a student or group of students and then doing whatever is necessary to see that the participants remain involved in that activity. The teacher's goal, in other words, is student involvement rather than student learning. It is true, of course, that the teacher hopes that the environment will result in certain fundamental changes in the students. The learning is, in this sense, a by-product or a secondary goal rather than the thing about which the teacher is most directly concerned.

Second, as both Brophy (Note 21) and Shavelson (Note 34) suggest, technical teacher behavior makes sense in terms of cognitive information processing. Interrupting an established activity flow in a classroom to reflect on and consider an alternative (while simultaneously trying to keep 30 pupils involved) increases significantly the information-processing demands placed on the teacher. In effect, a "cognitive overload" occurs and the teacher must simply move on. Most who have taught school for any length of time admit that this, indeed, is the way it often is.

A third hypothesis, noted earlier, is that the demands of the workplace, whether viewed as the classroom, multiple role strains, or society at large, account for the paucity of observed teacher reflection during instruction. While a different kind of decision making may be occurring in contexts other than public lessons (Shulman, Note 9), the complexities of the workplace severely limit interactive decision making.

Finally, the fourth hypothesis reflecting classroom realities is seen in the work of Barnes, Putnam, and Wanous (Note 35). They have created a teacher education program based on the concept that prospective teachers must be effective classroom managers before they can be effective instructors. In effect, they are saying that classroom management must be automatic in order for teachers to make room in their information processing apparatus for interactive decision making. Hence, teachers who must consciously attend to the technical demands of management become technicians; if these tasks become automatic, the teacher is free to concentrate on instructional decision making.

The nature of reading instruction itself can help explain why so many teachers look like technicians.

First, in analyzing the research being conducted at the Institute for Research on Teaching on clinical reading diagnosis and the data that repeatedly indicate that practicing and certified diagnosticians are not even reliable with themselves, much less with one another, Brophy (Note 21) suggests that the fault lies with the primitive nature of our knowledge base in reading. In other words, reading teachers have difficulty being reflective because there is not enough reading knowledge to allow them to be specific and truly diagnostic. Hence, they must be technicians. As Brophy (Note 21) says,

> In educational diagnosis and remediation, it is as if we are treating all patients by telling them to get some rest, take aspirin and drink a lot of fluids no matter what their problem. . . Until we develop a knowledge-base to support more truly diagnostic and remedial procedures, I do not think that we can expect much from even "experts" let alone ordinary classroom teachers.

Second, reading teachers may behave like technicians because of the prominent role played by materials, particularly the basal textbook (Clark & Yinger, Note 28; Osborne & Shirey, Note 36). Teachers are encouraged and often mandated to use basals, but these materials themselves are designed for use by technicians. The teacher's guide, as recently noted by Durkin (Richey, Note 37), provides many more practice activities than instructional suggestions, and the texts, workbooks, and other materials are all designed to be used in a question-and-answer, recitation format. As my colleagues

and I have been discovering in our research on teacher conceptions of reading (Buike, Burke, & Duffy, Note 26), the basal materials rather than theoretical considerations, rational models, or reflective procedures dominate teacher thinking because basals aid in resolving management concerns while simultaneously being professionally acceptable.

Third, teachers behave as technicians because researchers inadvertently promote such behavior. It is not unusual, for instance, for the teacher to be described as a mediator of materials (Gage, 1978); for instruction to be characterized as technology (Barr & Dreban, 1977); for teachers to be seen as little more than custodians of curriculum;[3] for methods texts and sessions at professional reading conferences to emphasize activities, games, and drills designed for recitation formats; for methods courses to promote such patterned teacher monitoring behavior as SQ3R and the Directed Reading Lesson; and for good comprehension instruction to be equated with "asking the right questions," which, as Durkin (1979) points out, is really just an assessment technique. Even prominent reading professionals such as Barr and Durkin tend to equate instruction with the essentially technical task of instructional pacing (Barr, 1973-74) and use of teacher's guides (Richey, Note 37).

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[3] It sometimes sounds like reading educators are recommending that once one or another aspect of the reading process gets into the curriculum, the rest will take care of itself. Consider, for instance, Coltheart's (1976) dismissal of teachers in favor of curriculum when discussing early readers in a recent publication entitled "Reading Research: Advances in Theory and Practice:"

> The fact is that reading teacher's practices are what they are. All readers, early or non-early, pass through a school curriculum, and if this curriculum is such that it eliminates the advantages that early readers initially had, that is that: early reading is simply beneficial.

Finally, reading teachers may become technicians in self-defense. Not only do teacher education programs supply prospective reading teachers with little other than technical "tricks of the trade," they often give the impression that reluctant readers can be transformed into fluent readers simply by caring about them, by letting them "learn to read by reading" or by letting reading acquisition happen naturally. Good (Note 13) addresses this issue when he suggests that teacher education programs may contribute to low teacher efficacy by giving prospective and in-service teachers unrealistic expectations about what to expect when teaching reading. As he says,

> Teachers need to understand that teaching is a very tough but feasible task. Teachers' expectations for simple solutions to problems can turn into anger, frustration and, ultimately, withdrawal in the face of classroom realities.

In short, teachers may be technicians because that's what they're taught to be. They are told that reading acquisition is a natural phenomenon requiring little teacher effort or guidance, and they are given instructional suggestions that limit their actions to monitoring and reacting rather than presenting, stimulating, and guiding. When teachers have been prepared in this way and are then faced with the realities of classroom life, what recourse do they have but to become technicians?

Summary of technical behavior. In sum, the above findings contradict some cherished beliefs about teacher's reflective behavior. Rather than being driven by goal-oriented and theoretically-consistent instructional models, teachers appear to be preoccupied with activities that maintain activity flow. Consequently, teachers look like technicians and managers rather than like reflective professionals.

There are, however, three points that temper this conclusion.

The first, as noted above, is that teacher educators may well be contributing to the creation of such technical behavior and must be prepared to do more than simply condemn it.

Second, it must be noted that the generally unpalatable picture of the teacher as a technician is nevertheless real. These data illustrate the fact that the teacher is a normal person who, despite frailties and limited resources, must cope with that fluid, complex, demanding, and potentially volatile place called a classroom. While the findings may be alien in terms of a reading researcher's schema, they are no less valid for that.

Finally, Good (Note 13), Fenstermacher (1980), and McDonald (1977) suggest that the ultimate key to true teacher effectiveness may lie with teacher judgment in rationally applying suggested findings rather than in unquestioningly applying algorithms and prescriptions. While good technicians may be more effective than poor technicians, the ultimate in effective teaching will require more than technically competent teachers.

Summary of Teacher Effectiveness Findings

In some ways, it is overly simple to summarize the past decade of research on teaching in just two conclusions about opportunity to learn and teaching as technical behavior. However, these conclusions capture the essence of the reality of classroom life, and it is this reality that is the major contribution of research on teaching. With these conclusions as a base, researchers can hopefully move to studies that not only describe what is currently considered effective teaching, but also what effective teaching can ultimately become.

Implications for the Reading Profession

The teacher effectiveness research places much of the reading profession squarely between assumptions about "what ought to be" and the reality of "what is." On the one hand, some people argue that reading acquisition ought to be a personalized interaction between child and text that develops with little artificial intervention from teachers, and that teachers should function in indirect and unstructured ways because they are reflective professionals. In contrast, the research on teaching suggests that effective teachers of reading (especially beginning reading) generate opportunity to learn by establishing efficient management, structured learning, and psychological conditions, and that they keep their sanity by deliberately minimizing the need for "in-flight" decisions.

The conflict between "what ought to be" and "what is" is a painful one. If left unresolved, it can weaken chances for collaborative work involving reading and teaching researchers. Since the goal of this paper is to build collaboration, the following implications are presented in terms of how research on teaching can help shape reading education efforts, influence reading research, and provide collaborative agendas for the future.

Teacher Education

The first implication of research on teaching is that communication with prospective and in-service teachers must include acknowledgement of the realities of classroom life. To

prepare reading teachers without giving adequate attention to direct instruction, management, psychological conditions, and the current limitations in the classroom teacher's information-processing capacities results in a distorted picture of what the world of the classroom is really like. Ultimately, a backlash occurs; the schema of the reading educator conflicts so dramatically with the practitioner's schema that the entire message about reading is rejected. If the goal of educators is to have teachers apply the emerging findings about the reading process, they must present these findings within points of contact representing the experiences teachers have had in the real world of classrooms. Failure to do this risks the rejection by teachers of all the potential benefits of reading research.

Second, the teacher effectiveness findings must be examined not only for the clues they provide regarding contextually valid vehicles in which messages about the nature of reading can be embedded, but for their potential in helping teachers become better reading instructors. In short, reading educators must help teachers not only with the nature of what is taught (at Shulman's third level) but with how it is best taught (the first and second levels). This means that they must deal with the pedagogical problems inherent in equitably distributing opportunity to learn among 30 children and with how teachers are to find room in their already over-crowded cognitive world for the information-processing demands inherent in the instructional recommendations reading educators make.

Third, reading educators must highlight the limitations, as well as the strengths, of their instructional findings. A major limitation is that effective teaching in one context is not necessarily effective teaching in another. Consequently, reading educators must help teachers exercise judgment in applying teacher effectiveness findings to appropriate contexts and should avoid promoting universal theories and models of reading instruction that imply the use of identical instruction in all contexts.

Finally, reading educators must recognize that the findings on teaching present only a partial picture of instruction. The most glaring example of this is the preoccupation with Carroll's concept of "opportunity to learn" and the relatively minor emphasis on "quality of instruction." In effect, the weight of the quantitative time-use data has caused researchers of teaching to equate quality with maximized opportunity to learn. Virtually no research has been conducted that examines effects of the qualitative guidance or assistance teachers offer as a prelude to or as part of the structured direct instruction activities, nor has anyone examined the ways opportunity to learn might be modified as a result of teacher guidance. I personally suspect that one reason why so many teachers conduct mechanical recitation sessions is that they have no concept of how to qualitatively assist pupils in their learning. They only know how to keep them on task. As Good and Brophy (1978) state,

> Teachers sometimes act as if the students are supposed to learn on their own with no help from them. . . Such behavior represents a fundamental failure to appreciate the teacher's basic role. The teacher is in the classroom to instruct.

Instruction is more than creating opportunity to learn. Research on teaching, unfortunately, provides little specific assistance regarding this additional dimension of teaching.

Reading Research

Teacher effectiveness findings suggest four implications for reading research.

First, reading research that focuses on instruction should, at the minimum, demonstrate an awareness of classroom realities and control for crucial teaching variables. Conducting research on the teaching of inferencing without controlling engaged time is one example of how ignoring findings on teaching can taint research on reading, to compare teachers of reading without attempting to account for efficacy is another, and conducting reading research in laboratory contexts or with college students and suggesting how the findings should be applied in elementary classrooms is yet another. Researchers of reading, especially those studying comprehension, have an obligation to either control for the realities of instruction in the design of the study or to acknowledge their absence when reporting the data.

Second, reading researchers, like teacher effectiveness researchers, must begin looking more systematically at various contexts. The results of research on teaching speak clearly to

the point that what is true at one grade level with one ability group in one socioeconomic setting is not necessarily true for another. Sweeping generalizations cannot be made about teaching generally, and they cannot be made for reading instruction in particular. Consequently, conducting reading research in multiple contexts is essential.

Third, reading researchers should consider making greater use of qualitative research designs. To date, descriptive research has been little used by reading researchers, particularly those studying reading comprehension instruction. However, a program of such research would go a long way in informing comprehension researchers of the complexities of classroom instruction, the limitations of teachers' information-processing capacities "under fire," and the realities within which laboratory findings must be applied.

Finally, reading researchers should consider strengthening their research programs by adding practitioners to their research teams. This does not mean the addition of former practitioners who are currently graduate students training to become researchers. Such people, of course, are expected to emulate researchers and, as such, can hardly be expected to represent practitioners. Instead, practitioners should be hired *as practitioners* and should be charged with the responsibility of insuring relevance and reality in research designs and in the conclusions drawn from findings. This is not a pie-in-the-sky notion. Such teacher collaborators are an integral part of the research

projects conducted at the Institute for Research on Teaching and their impact on research quality has been significant.

Future Cooperative Ventures

Research on reading is a dynamic field, and so is research on teaching. The nature of schooling dictates that the ultimate agenda for both communities is a shared one--applying findings in classrooms to improve instruction. This shared agenda could be expedited by collaborative ventures. While the possibilities for such cooperation are extensive, the following five examples are illustrative.

One of the differences heretofore separating the two research communities has been the respective object of focus. Reading researchers have focused on the curriculum and the learner; teaching researchers have focused on the teacher and instruction. Recently, however, each research community has become more interested in the other's object of focus as findings have pointed more and more to the complex interaction of learner variables, teacher variables and, in reading, text variables. As Brophy (Note 18) points out, "the development and merging of these interests should fuel a major trend in the 1980s." Certainly, reading and teaching researchers should collaborate in this trend.

Second, the affective goals of schooling will be a major research thrust in the next few years. Little is currently known about what constitutes effective teaching in this area. However,

reading researchers, with their interest in comprehension as a personalized process and in affective responses to leisure reading, have much to contribute to collaborative research in this area.

Third, teacher effectiveness research is always bound by outcome measures. This is especially so in reading, as evidenced by past controversies regarding what constitutes achievement (see House, Glass, McLean, & Walker, 1978, for one example) and by current debates regarding the validity of using standardized test measures in teacher effectiveness research. While the nature of the context will always exert some influence on the type of outcome measure used in future studies, additional effort will nevertheless be needed to identify appropriate outcome measures in reading, particularly in terms of the affective and personalized dimensions of language learning. This is another area that clearly calls for collaboration among reading and teaching researchers.

A fourth potentially profitable area of collaboration springs from the emerging findings on text processing and meta comprehension. Both imply the use of hueristics to help learners become more aware of and systematic about their language processing. Researchers from the reading and teaching communities could collaborate in this area to determine what role the teacher should play in presenting such hueristics to children. It would seem particularly important to insure that this not become yet another example of recommending patterned, technical, monitoring behavior to teachers.

Finally, the most important collaborative reading-teaching effort involves moving beyond structured opportunity to learn

toward Carroll's concept of "quality of instruction." More specifically, the reading and teaching communities should conceptualize and test various guidance and assistance strategies that teachers of reading comprehension can use to go beyond the assessment tactics noted by Durkin (1979) and the recitation patterns noted by Duffy and McIntyre (Note 32), and toward what Barr and Dreeban (1977) describe as "presenting subject matter clearly, visibly, audibly, and understandably" and what Durkin (1979) defines as instruction. Although the reading profession has traditionally given little attention to this aspect of teaching, now is the time to do so.

The following five embryonic descriptions of instructional guidance may serve as a starting point. They represent a conceptual cycle. At the beginning point are those conceptions of teaching that involve little guidance beyond mechanical devices such as pacing and content covered (Barr, 1973-74). Here, the teacher is little more than a reactive responder who coordinates instruction by adjusting pace to learning rates of pupils. In addition to the fact that pacing is probably more a function of activity flow and management than of teaching (and, therefore, emphasizes the teacher's role as a technician), such conceptions of teaching offer little guidance to pupils. Providing little additional guidance but reflecting a less technical role for the teacher is the position espoused by Goodman (Note 38) and Smith (1975) who conceive of the teacher as a facilitator who avoids formal instruction and allows children to learn to read by

interacting with books and language in natural, unconstrained, and uncontrived ways. At the middle points of the cycle are two positions. Closest to the Goodman-Smith concept are Tierney and Pearson (Note 33) who emphasize the personalized nature of comprehension but also see the teacher as providing guidance in the manner of a "tour guide on a journey to the center of the mind." Representing more teacher direction and assistance is the position described by Duffy and Sherman (1977) and by Duffy and Roehler (Note 39) in which the teacher is proactive in presenting cues and gradually diminishing assistance to guide pupils toward desired comprehension learnings. Finally, there is the conception of Becker, Engleman, and Carnine (1979) in which the teacher exercises extensive control in directing pupil responses, even to the extent of requiring responses from pupils in unison. Hence, while this latter view may represent the ultimate in guidance, it also completes the cycle by coming back to the teacher as a technician who, in this case, often follows a prepared script when teaching.

While contextual influences suggest that no particular concept of teaching will be equally effective in all situations, it is intuitively obvious that teachers who provide assistance will create more success than those who simply structure "opportunity to learn" or who leave pupils to learn by natural means. Pursuit of such quality instruction is, in my view, the most important way in which the two research communities can collaborate in the future.

Conclusion

Regardless of their particular research backgrounds, the reading and teaching communities share a desire to create more effective schooling, particularly as it relates to language learning. Collaboration among the two research groups can help us reach this goal. Despite apparent disparities between reading educators' assumptions about classrooms and the findings from research on teaching, a schema-match based upon common points of contact is possible. Hopefully, this paper provides a beginning.

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